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Date: December 18, 2003

To: U.S. Patent & Trademark Office Fax #: (703) 872-9306 Confirm#:  
Examiner: Naff, David M.  
Art Unit: 1651

Client Matter#: KYA-4.01 (20866-12)

From: Lauren T. Knapp      Sender's Number: 617-832-3084      User #:**6999**

**Total Pages Sent (Including Cover Sheet):** 12 **Office:** Boston

## Message

## **OFFICIAL COMMUNICATION**

Re: U.S. Patent Application No. 09/455,952  
Filed: December 7, 1999  
Attorney Docket No.: KYA-4.01 (20866-12)

Dear Sir or Madam:

Enclosed are the following:

1. Transmittal Form with Certificate of Facsimile Transmission (1 page);
2. Fee Transmittal Form (*in duplicate*) (2 pages total);
3. Response to Final Office Action (8 pages); and
4. This fax cover sheet (1 page).

20/555883.1

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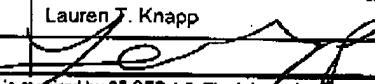
BOSTON / One Post Office Square / Boston, Massachusetts 02108 / TEL: 617.832.1000 / FAX: 617.832.7000  
WASHINGTON, DC / 1747 Pennsylvania Ave., NW / Suite 1200 / Washington, DC 20006 / TEL: 202.223.1200 / FAX: 202.785.6887  
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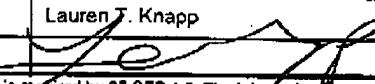
PTO/SB/21 (08-03)

Approved for use through 07/31/2008, OMB 0651-0031  
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE  
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

<b>TRANSMITTAL FORM</b> <i>(to be used for all correspondence after initial filing)</i>		Application Number	09/455,952
		Filing Date	December 7, 1999
		First Named Inventor	G. Michalopoulos
		Art Unit	1651
		Examiner Name	David M. Naff
Total Number of Pages in This Submission	8	Attorney Docket Number	KYA-4.01 (20866-12)

<b>ENCLOSURES (check all that apply)</b>		
<input checked="" type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment / Reply <input checked="" type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s); <i>(please identify below)</i>
Remarks	<b>Customer Number : 25181</b>	

<b>SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT</b>		
Firm or Individual name	Lauren T. Knapp	
Signature		
Date	December 18, 2003	

<b>CERTIFICATE OF MAILING</b>		
<p>I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.</p>		
Typed or printed name	Lauren T. Knapp	
Signature		
Date	December 18, 2003	

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

# FEE TRANSMITTAL for FY 2004

Effective 10/01/2003. Patent fees are subject to annual revision.

 Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$)

0

Complete if Known	
Application Number	09/455,952
Filing Date	December 7, 1999
First Named Inventor	G. Michalopoulos
Examiner Name	Naft, David
Art Unit	1651
Attorney Docket No.	KYA-4.01 (20866-12)

## METHOD OF PAYMENT (check all that apply)

Check  Credit card  Money Order  Other  None

 Deposit Account:

Deposit Account Number

06-1448 Ref: KYA-4,01

Deposit Account Name

Foley Hoag LLP

The Director is authorized to: (check all that apply)

Charge fee(s) indicated below  Credit any overpayments  
 Charge any additional fee(s) during the pendency of this application  
 Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

## 1. BASIC FILING FEE

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	285	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1006	160	2005	80	Provisional filing fee	

SUBTOTAL (1)

(\$ 0)

## 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	-20 **	=	0	X	Fee from below	Fee Paid
Independent Claims	3	-3 **	=	0	X	= 0
Multiple Dependent				X		= 0

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1202	18	2202	9	Claims in excess of 20	
1201	88	2201	43	Independent claims in excess of 3	
1203	290	2203	145	Multiple dependent claim, if not paid	
1204	88	2204	43	** Reissue independent claims over original patent	
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent	

SUBTOTAL (2)

(\$ 0)

\*\* or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1612	2,520	1812	2,520	For filing a request for reexamination	
1604	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	420	2252	210	Extension for reply within second month	
1253	850	2253	475	Extension for reply within third month	
1254	1,480	2254	740	Extension for reply within fourth month	
1255	2,010	2255	1,005	Extension for reply within fifth month	
1401	330	2401	165	Notice of Appeal	
1402	330	2402	165	Filing a brief in support of an appeal	
1403	290	2403	145	Request for oral hearing	
1451	1,510	1451	1,510	Petition to Institute a public use proceeding	
1452	110	2462	55	Petition to revive - unavoidable	
1453	1,330	2453	885	Petition to revive - unintentional	
1501	1,330	2501	565	Utility issue fee (or reissue)	
1402	480	2502	240	Design issue fee	
1503	640	2503	320	Plant issue fee	
1480	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17 (q)	
1806	160	1806	160	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	770	2809	385	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810	770	2810	385	For each additional invention to be examined (37 CFR § 1.129(b))	
1801	770	2801	385	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) \_\_\_\_\_

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3)

(\$ 0)

## SUBMITTED BY

Name (Print/Type)	Lauren T. Ulapp	Registration No. (Attorney/Agent)	45,605	Telephone	617-832-3064
Signature				Date	December 18, 2003

WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

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EXPEDITED AFTER  
FINAL PRACTICE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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In re Application of:

George Michalopoulos

Application No: 09/455,952

Filed: December 7, 1999

For: *A Novel Long-term Three-Dimensional  
Tissue Culture System*

Examiner: Naff, David M.

Art Unit: 1651

Attorney Document No.: KYA-004.01

(20866-12)

DEC 18 2003

OFFICIAL

Response and Amendment

Dear Examiner Naff:

In response to the Final Office Action mailed on September 22, 2003 in connection with the above-identified patent application, Applicants respectfully submit this Response and Amendment. Please amend the claims of the subject application as indicated herein. A Notice of Appeal is filed concurrently herewith. If any additional fees are due, the Commissioner is hereby authorized to charge them to Deposit Account Number 06-1448, Reference KYA-004.01.

20/571830.1